status

NEWSLETTER

NOVEMBER/DECEMBER 1987

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STATUS BBS
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This is the first issue of the revised printing schedule for our newsletter. I am very grateful to all our 'nimble fingered' authors and typists for their contributions. With this issue we are sure to keep alive the technical image we have become associated with. This months articles include:

Ram Upgrade 520ST- Kent Irwin
SG10 Mod- Dick Litchfield
Avatex Configuration- Jim Parker
Phasar Review ST- Bill Maddrey
Empire Review ST- Kent Irwin
Computerised Racing- Jim Parker
New TOS ROMS & Blitter
Humor
Puzzle

As you look over the contents, ou will notice that very few of the articles are 8BIT oriented. This is not intentional, but, due to the lack of the article submissions. 8BIT articles printed here are sure to be reprinted in other newsletters and you could become an international author with your software/hardware reviews or 'How To-Tips'.

Our next STATUS Newsletter (Jan/Feb) will go to press the first week of January. Deadline for article submissions for publication is December 20. Articles can be uploaded to the STATUS BBS, when asked for file type, hit the 'N' key. I will also accept your article on disk or hard copy. Your contributions are essential to keep our newsletter alive.

Thank you!

Buck Maddrey (ed)

NEW MEMBERS

STATUS would like to welcome the following new or returning members:

Mike Brock - Va. Beach
Wally Burket - Va. Beach
Willie Niepraschk - Va. Beach
Kent Irwin - Norfolk
Duane Harding - Va. Beach
Johnathan Tinsley - Va. Beach
Bill Maddrey - Houston Texas
Rick Smith - Suffolk
Dave & Karen Gibson-Va. Beach
Ron Manson - Va Beach
Michael Boone -Va. Beach
George Hoffman -Va. Beach
Drew Hickey - Va. Beach
Don Marshall- Va Beach

Glad to have you with us!

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UPCOMING EVENTS

Mark your calendar of events for probably the last ATARIFEEST of the year.

SUNATARI '87 - November 21, 22 - Royce Hotel, West Palm Beach, Florida. This fest is billed as the "only ATARI specific show in the Southeast this year". Reports have it that the Palm Beach computer club has been working very hard to bring this show off. ATARI Corp, Avante Garde and several other biggies have been signed for participation.....See ya there!

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IN A BAD MODE

by Jim Parker

It wasn't too long ago that the club's bulletin board was hit by lightning, and I sympathize with Doug Boynton (sysop) over the aggravation and inconvenience that can cause. I believe the same thing happened to me. We had a thunder storm about a week after the one that wiped out Status. The next day, I tried to print a letter on my printer and the monitor showed "DEVICE TIMEOUT"! All the lights on the switches all lit up and the printer self-test was positive.

I took my interface, an MPP-1150 over to Buck Maddrey's for a test. The interface proved no good. I phoned Dick Litchfield about the Atari 850 interface he had for sale. We made the transaction over the phone, and I was very pleased. I felt I was out of the woods, and back in business. That evening I found out how wrong I was. I tried to to get on various bulletin boards without success. I then determined that my modem was also put out of commission. By this time I was wondering if the computer was damaged too!

The urge had been there to purchase an Avatex 1200 HC, and with Dick's Atari 850 interface on the way, I would be properly equipped. The old MPP-1150 interface is not adequate to run the Avatex 1200 HC modem.

I then took delivery of the Atari 850 interface, and started my search for the Avatex 1200 HC. I purchased one that same day, rushed home, and began unpacking and hooking both the interface and the modem. I was ready for the test. The printer worked fine, and I was pleased to be back in operation.

I then obtained the 850 EXPRESS! modem program and proceeded to continue the learning process of my new equipment, only to run into more problems! The factory suggested dip switch settings were not the right ones for the Atari 130XE. Buck and I spent a few hours and finally hit the right dip switch settings, but we were having some difficulty in getting on line with various bulletin boards. We knew Status was down and Temple possibly did not like the Avatex modem, so we tried Interface and got on line. I let a few days go by and still could not get on line with Temple, and everyone said it was up and working. I finally called the Avatex people. They were very polite and helpful. They determined through a series of questions, answers, and online tests, that I was in the wrong mode. The man from Avatex stated "The 1200 HC is a Ascii modem". I was in Atascii instead of Ascii. You must be in Atascii to dial. When connected, leave terminal mode and change to Ascii, go back to terminal mode, and press return, from here it works great.

Here are the dip switch settings for various combinations of computers and interfaces and the Avatex modems:

1> 130XE, Avatex 1200, 850 Interface, 850 Express prog. All up, #8 down.

2> 800XL, Avatex 1200, 850 Interface, 850 Express prog. All up, none down.

3> 130XE, Avatex 1200HC, 850 Interface, 850 Express prog. 1,3,5,8 down, all others up.

4> 800, Avatex 1200, 850 Interface, 850 Express prog. All up, none down

5> On the ST the factory dip switch settings work fine.

I hope this information is helpful and saves you some time and aggravation.

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MOBY ST

By Kent Irwin

I remember it well - the day I brought my first computer home. Lurking inside the sleek plastic case was an esome 5K of RAM. Of course, by the .ime the operating system was done with it, 2K was gone, but I still had three thousand bytes of memory. The world laid at my feet. The power of computing was mine!

After carefully unpacking everything and reading the manuals, I set up my new-found powerhouse on the bar separating my kitchen from the dining room and set to work typing in a classic Civil War game using the on-board Basic language interpreter. Every fifteen or twenty minutes I would carefully save my work to the speedy tape drive so as not to be foiled by an unexpected power outtage or other catastrophe. After about two hours of this, I received the first of what would become an endless succession of horrific error messages - OUT OF MEMORY! Eeegads, three thousand bytes of storage used up just like that!? I examined the program listing and actually started counting up the number of characters. Yep, it was going to take something like 10K of RAM to type in and run the program. Oh well, no problem. A quick call to the store where I bought the computer revealed that they did indeed have in stock the optional 16K memory expanders, and for only $99.95! The computer had not even had a chance to completely cool off by the time I was back, memory expander in hand, to resume where I had left off. I finished Civil War within a day or so and advanced to Super Star Trek. After all, I had finally entered the Space Age with my new acquisition, and now I had 19K of usable RAM!!

Well, a year or so went by and 64K machines were starting to come within financial reach of normal people. I had expanded my computer to it's maximum, but even so, I was starting to feel a little behind the times, so, you guessed it, I went out and bought one of the 64K Leviathans. I remember that well too. Upon my arrival home I proudly told my wife that I now had all the computer I would EVER need! Famous last words...

So here I am today. One or two computers weren't enough for me. Now I own a computer store full of 'em! I moved up to the incredible power of an

Atari 520 ST shortly after I opened for business. 512K of RAM - truly awesome!! But there was a cloud behind the silver lining. I soon came to realize that I had somehow contracted an incurable disease - the dreaded Ramaphobia - fear of not having enough RAM!

Needless to say, I was soon taking my trusty 520 apart in order to perform the delicate surgery required to upgrade to one ENTIRE megabyte of RAM. Awesome!

But, I was inexorably caught in the clutches of Ramaphobia. I knew the ST could address as much as four megabytes of RAM using 1 megabyte RAM chips. I needed more RAM, I had to have it, I lusted after it! Alas, the 1 megabyte chips were just too expensive. And so I waited...

The long wait was finally over a few weeks ago. I had heard that the wondrous 1 meg chips, the key to my salvation, had fallen in price to as little as $16 apiece. It was time to strike. And so it came to pass, I called a fellow named Rob at MichTron to inquire about some 2 and 4 meg upgrade boards that they were rumored to be selling. I couldn't just replace the 256K RAM chips already in my ST owing to the fact that the 1 meg wonderchips are not pin-compatible with them. I would have to have a daughterboard for them. Once I had Rob on the phone he informed me that they did not yet have the 4 meg upgrade boards, just the puny 2 meg ones. But, what the heck, I told him to send me one. Once installed it would give me 2.5 megabytes (2 on the daughterboard and .5 in the original bank) of RAM. Rob also referred me to an outfit called The Chip Merchant from which I could buy the 1 meg wonderchips for $16. I decided not to order the chips until after the board had arrived though. That turned out to be a mistake.

The upgrade board arrived via UPS on a Friday and after picking it apart over the weekend I called the Chip Merchant on Monday to order the chips. Bad news. I was told that the volatile chip market had just taken an upward turn and the 1 megabyte chips had gone up to over $25 apiece, and I needed sixteen of them! The fellow I spoke to went on to tell me that he would not even be stocking and selling them until they dropped in price again. Drat! And so I called my normal IC supplier to see if he had any and at what price. I was informed that they were currently out of stock but that I could order some at $26 apiece and they would ship them as soon as they had more. Being a chronic Ramaphobic, I told him to go ahead and send me sixteen. After all, I could always sell my car if I had to. I do have a bicycle.

About two weeks later my IC supplier had been restocked and my 1 meg chips arrived via the ubiquitous UPS truck. Seeing the UPS truck arrive each day is like watching Santa drive up in his sleigh! Anyway, I set to work. I disassembled my 520, removing the top case, keyboard and top RF

shield. Next I prepared to mount the RAM chips on the upgrade board. This daughterboard is a simple and straight forward three-part assembly consisting of the RAM board itself connected via ribbon cable to a piggyback chip socket for the Shifter chip and another ribbon cable leading to a small board or pad to be affixed to the MMU chip. There are also two wire leads attached for picking up power for the RAMs. The particular unit I ordered was designed specifically for the 520 ST. Another is available for upgrading a 1040ST.

I began by first plugging the required sixteen RAM chips into the sockets on the upgrade board. It was easier to do this before actually mounting anything inside the ST itself. The RAM board measures roughly 2.5 by 3.5 inches and has the sixteen RAM sockets arranged in two rows of eight. Once the chips were in place I mounted upgrade board on the ST motherboard. The particular ST I was upgrading was of the pre-RF modulator variety, so the blank space on the motherboard where the RF modulator would have been was the natural and recommended place to mount the RAM board. It fit like a glove and was held in place by two adhesive strips on the bottom side. Next, as per the instructions, I removed the Shifter chip from its socket, inserted the piggyback socket and remounted the Shifter inside it. So far so good. The next step was to mount the small board or pad that I mentioned before on the MMU, or memory management chip. This is where the address lines for the RAM are picked up and is also what I consider to be one of the weak links in the design of the upgrade. The reason I consider it a weak link is because of the design of the MMU itself and the way that its mounted in the ST's. The MMU chip is about 1.5 inches square with sixty eight pins arranged around the outside edges. It recesses in its socket, being held in place by only the spring tension of the corresponding socket pins. This setup is responsible for the only problem common to the ST's - so called Loose Chip Syndrome. You may have heard of it or experienced it yourself. If the MMU is not perfectly seated with equal tension on all pins, then a whole host of strange RAM and I/O problems can occur. The GLUE chip is also of this design with all the same potential for problems. Loose Chip Syndrome most often manifests itself after an ST has been bumped around in shipment. I see it most often in brand new machines that I have just received in the store. Anyway, the aforementioned pad in the upgrade assembly has several pins arranged on the bottom side that must be perfectly wedged between the side of the MMU socket and the MMU itself. There is alot of room for error here and excellent potential for damaging your ST if great care is not taken in insuring that each pin goes exactly where it's supposed to. Once mounted, the remaining potential for problems results from the fact that wedging the pins between the MMU and its socket creates unequal pressure on the rest of the chip pins, increasing the possibility of Loose Chip Syndrome

later on. Enough said for the moment.

The last step before reassembling and testing the machine was the attachment of the two power leads. This is the other weak link in my opinion. The leads have mechanical clips attached to the ends for ease of installation without soldering. But there's no free lunch. While not having to solder anything is nice, not doing so in this case could invite catastrophe later if one of the clipped leads gets loose. I recommend snipping off the clips and soldering the leads permanently. One lead can be attached to any grounded point in the computer. The mounting screw of the RS232 or parallel port connector is convenient and recommended in the instructions. The positive lead can be easily attached to one of the connections on the ST's power switch.

Having completed the upgrade and carefully double-checked everything, I reassembled the ST and was ready for testing. The moment of truth! I booted up with FREERAM.ACC to check the memory. Aha, over two and a half megabytes of free memory! Exulting in my newfound power, I installed DeskCart, K-Switch, a humongous ramdisk and proceeded to boot up and run various different pieces of software on either side of K-Switch. All went smoothly and I still had beau coup RAM to spare. Nirvana!

Reflecting back on the installation, there are a few things that I would recommend to anyone desiring to upgrade their own ST. First of all, projections are that 1 megabyte RAM chips will continue to climb in price until the end of the year at which point I am told that they should start coming back down again. Unless you've got big bucks I'd advise that you wait. Secondly, while the documentation for the upgrade is adequate for someone who is familiar with the interior of the ST, it leaves alot to be desired for the novice. The first half of the docs are in German, the second half being a poor English translation thereof. Fortunately, photographic illustrations are included. While I don't read German very well, I did notice some German instructions for installation in a 260 ST, in case you have one of those. Better bone up on your German first though! Lastly, I highly recommend soldering the power leads as I mentioned before and while I did use the wedge-in pad supplied attachment to the MMU, at the first hint of trouble I intend to cut it loose and hard-wire the connections on the motherboard. Decide for yourself but you had best know what you're doing if you elect to hard-wire it yourself! Incidentally, cost of the upgrade board from MichTron is $115, unpopulated of course....And so it came to pass, Moby ST was born. My chronic Ramaphobia has been banished into remission. Now I really do have all the computer I will EVER need!

"Famous last words!", my wife chuckles.

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A/B SWITCHES

8-BIT and ST Computers

by Dick Litchfield, STATUS

Warning: This hardware modification will void any and all warranties on your printer. The author and STATUS assume no responsibility for anyone's attempts to install this modification. Installation is at your own risk.

No this isn't a hardware fantasy or horror story! It just another of those dumb but somewhat satisfying modifications that can make your computing life a little easier.

After buying an ST, I found myself constantly unplugging and plugging the printer and modem cables when I switched from the 8-bit to the ST or vice versa. Added to this aggravation was changing the dip switch on the Star SG-10 for the line feed (LF) function. The real kicker was the screaming mouse when the printer didn't work with "Her" 8-bit.

A little research led to the logical answer; A/B switches, those little boxes that allow computers and peripherals to share one another. I bought a RS-232 A/B switch, manufactured a third cable and the combination worked great with the modem.

Getting a switch for the printer was a little different matter. I wanted the parallel A/B switch to make the usual switch between compuiers PLUS change the auto line feed dip switch setting. This required a "remote dip switch" function be installed in the box. My solution was to bring the dip switch contacts out through unused pins on the Centronics connector and carry them through the third cable into the A/B switch. Inside the parallel A/B switch a little modification made one switch position short the contacts to simulate a closed dip switch. Using this position for the ST and the other position for the 8-bit made the switch box meet my custom requirements.

Before you run out and buy a set of RS-232 and Centronics A/B switches to do this project, make sure the Centronics switch is capable of switching pins 14 and 15 and that you can install the changes required in the following instructions.

The following sheets detail the steps to "build" this setup for a Star SG-10 printer. Here's hoping other hackers will add the details necessary to install the same modifications for other printers! I have included a "Degas" picture of the jumper installation on the SG-10 printed circuit board.

Cable and A/B Switch Modification

1. Before we work on the printer, we need to make a third cable to go from the A/B switch to the printer. This cable needs the usual connections required for the Star printer PLUS two additional conductors between pins 14 and 15 on each end. You can make this cable with 36 conductor ribbon cable

and a couple of male insulation displacement Centronics connectors. For those who would rather purchase a cable, I have listed a reasonably priced source at the end of this section.

2. Once your have the third cable, a small modification to the A/B box will complete the job. Inside the box remove the connections at pins 14 and 15 of EITHER the A or B connector. This connector will be for the 8-bit computer. On the other connector, connect a jumper from pin 14 to pin 15. This connector will be for the ST. Do not make any modification to the common connector usually labeled "C".

3. That's it for the cable and the box. Proceed to the printer modification instructions.

Cable source: Altex Electronics, Inc., San Antonio, Texas
Ph 1(800)531-5369

Flat Cable assembly, p/n 5736P-P
(Approx. price $14.02)

Round Cable assembly, p/n 36MM-6
(Approx. price $12.95)

SG-10 Modifications for use with the custom A/B Switch

1. Turn the printer off and unplug the power and Centronics cables.

2. Remove the smoked plexiglass cover, paper, paper separator, paper guide, platen knob and the tractor feed unit.

3. Next remove the two screws located at the top rear of the printer. Then gently lift the upper half of the case at the rear. Lift it just enough to enable unplugging the two connectors at the switch panel in the right front corner of the upper case. Once these are disconnected, continue to remove the upper case, being careful not to break the tabs hooked into the front of the lower case.

4. Once the upper half of the case is off, locate and unplug connectors CN4, CN5, CN7 and CN8 from the main printed circuit board.

5. Now remove the three screws which hold the circuit board in place. Lift the rear of the circuit b slightly and then pull toward the rear of the case to clear the plastic clips holding the front of the board.

6. Turn the circuit board over. Install jumpers using insulated #30 wire wrap wire from the Centronics connector pins 14 and 15 to the solder pads of Dip switch #2-3. "Degas" files (SG10_AB.PI3 and SG10_AB.PI2) are furnished with this package for a good picture of the work involved.

7. Reinstall the circuit board in the lower case and plug in the connectors.

8. Reinstall the upper half of the case. Be sure to reconnect the control panel switch connectors.

9. Reinstall the tractor unit, paper separator, paper guide, platen knob, paper and plexiglass cover. SET DIP SWITCH #2-3 TO THE OFF POSITION.

10. Now set your computer up and plug the cables from the computers into the A/B connector designated. Plug the third cable into the switch box "C" connector and the printer.

11. Set the A/B switch to the appropriate position before you turn your computer and printer on. When you power up, the printer will be configured for the computer in use. NEVER CHANGE THE SELECTION WITH POWER ON THE PRINTER OR YOUR COMPUTERS! This may damage the computer, the printer or both. Apply the same rules you have always used concerning unplugging cables and you should have no problems.

Hope you enjoy the new simplicity of using both systems!

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SOFTWARE REVIEW ST

PHASAR

Phasar Financial Manager, a program for the ATARI ST Computers from Marksman Technology, Inc., written by Tom Marks and now supported and distributed by Antic Publishing Company.

First, Phasar is a program to keep one's money in an orderly fashion. From simple expenses to the most complex of systems. My first impression was that it was going to be difficult to set things up and get them rolling. NOT SO! The manual is written in tutorial style where one is guided through a sample set of "books" for a couple who both work and run a small business on the side.

The program is supplied on three separate disks which contain all of the tutorial files, program files and PHTAX which is an additional disk to assist in the preparation of one's year end Tax Returns for Uncle Sam. The program is not copy protected so the originals can be copied and then archived for safe-keeping. If you have the capability to do double-sided disks, then two of the disks can be combined to save disk swapping when it comes to finding help during operating the program.

The tutorial is quite easily followed as all keystrokes for each step are clearly demonstrated the first time through. Subsequent trips through the same operation are left to the user with help along the way. At any time, during any transaction, help is always available through the "HELP" key.

Capacities of the program are 39 Accounts (Checking, Savings, Investments, Credit Cards, etc.), 29 Income categories, 97 Expense

categories, plus Miscellaneous expense and a Cash account, and the capacity of 500 transactions per month. There are provisions for up to 17 sets of recurring transactions which saves the user having to re-type each transaction every month. An example of this would be deposits for Salary and allocating Salary deductions like witholding tax and FICA; automatic deductions from certain accounts for bank drafts against that account for loan payments. Each of the 17 pre-defined set has room for 20 transactions.

Operation of the program is quite easy. Once the program icon is opened and the program is up and running, you are presented with the opportunity to change the date to the current date, if it has not already been done through the control panel accessory. If you have set up any information in the "Special Events" you are presented with that screen which begins with today's date. Escape moves you to the main menu which is a familiar screen because of its top line of functions to which you point and click with the mouse. Upon opening up the "New Transactions" you are presented with all of the Accounts which have been set up and balances for each, plus the date of the last transaction. Entering a new transaction is relativly straight forward and for the most part the program prompts you through the transaction. First you are asked for an account and there is a default prompt of "checking". Pressing return will enter that account without further action. Check number and date are also defaulted to the check number last used plus one and the date will be today's date. For Payee one must type in the name. The expense or other account this check is charged is input by only the first couple of letters in the name of the account. If there are semi-duplicate names, like Loan House and Loan Car then a pop-up menu appears asking for a clarification of which one. At any time during any data entry one can activate a calculator by pressing "F2". This action will give you the opportunity to perform any mathematical operation and give on-results of that operation.

At the end of the data entry session the program asks if you want to print checks and prompts you through the printing of each individual entry. Pre-printed checks of any form can be used as there is a set-up menu which allows the positioning of check data on any line and any column and for length check. Following check printing, expenses for year to date, this month, a previous month or as a comparison to budget amounts can be reviewed. Budgets can be on a monthly basis or scattered throughout the year. For example, if you get quarterly dividends and you want to show them in the budget for certain months, it is no problem to set it up that way. Statement of Net Worth is also available and can be made to tie to the listing of accounts by using the same name in the amount column as it appears in the accounts list. For example, if you want your American Express outstanding amount to be shown as a

liability on the Net Worth Statement you would type in American Express Payable and then on the right, key the amount column to the name you have used for American Express. The balance will be updated each time you make an entry.

A few complaints about the program. I would like to have more room to make a longer name in the Accounts list. For example, there is only room for a few characters and once the name is established it can only be changed by going back and re-doing all of the entries to that account. In my particular case I called American Express, Amex. When I pay Amex the check is printed with A-M-E-X only in order to make sure that my checking account and the Amex amount are both reduced accordingly. In the beginning when I was setting up the check printing function, I was using a Panasonic KX-P1091 Printer and when it came time to print a check the printer took an inordinate amount of time to make a carriage return and line feed. After many phone calls to both Marksman, Antic, and Panasonic, it was determined that the program was forcing the printer into a graphics mode which does, in fact take a long time to print. I have since replaced the Panasonic with a Star NX-10 which does fine.

I was very impressed with support from Antic and Marksman Technology. I had had the program for about a week when I mailed off the registration form and a few days later a new set of disks arrived in my mailbox with the latest up-date of the program. I called Antic and asked if there was an up-date for the revised 1987 taxes and was told that it was in the works.

All in all, this is a very good program with very good support. If you are one who feels the need to maintain your expenses in some sort of order or you have need to establish a budget, then look at Phasar.

Bill Maddrey,
Houston, Texas.

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NEW TOS ROMS
BLITTER VERSION

From A.C.E. Newsletter Aug/Sept 1987
Retyped for STATUS by:Gene Rodriguez

The 1987 revision of TOS is scheduled for release in conjunction with the new "blitter" chip. The New TOS has been upgraded to include support for the hardware blit as well as retaining the software blit functions for full compatibility with older software which relies on hardware timing (a definite no-no).

Changes in the new ROMs are:

RS232- The RS232 handler has been completely rewritten. RTS/CTS handshaking now works. Baud rates 50 and 75 now work.

CLOCK- Support is now included for the MEGA ST's and is a built in, battery-backed-up realtime clock. The

realtime clock is automatically used by the XBIOS gettime and settime functions for the IKBD. The GEMDOS clock is reset from the realtime clock at the termination of every program.

STARTUP-Memory clear at system startup is much faster, improving performance on multi-megabyte systems.

DESKTOP- The desktop now includes a control for deactivating/activating the blitter chip. Also, the Save Desktop and Print Screen selections will request confirmation. Spurious characters are no longer written to the DESKTOP.INF file. Doing a PRINT or SHOW from desktop will now display characters with ASCII codes above 127. SHOW and PRINT use a larger buffer now, and single drive copies now require fewer disk swaps.

CART- Cartridge handling has been revised, eleiminating the need for "CARTSTART" code and allowing .TOS and .TTP programs. Lower case letters will now be accepted and passed to an application from the "Open Application Parameter" box.

AES- The AES will now send repeat clicks if the mouse button is held down on the arrow or page controls of a window, which lets a window smooth scroll. The AES underscore bug is now fixed. APPL_TPLAY and APPL_TRECORD now work. The limit of 30 characters on a line in an alert box is now rigidly enforced.

MOUSE- The mouse redraw can now be set to XOR mode. The system will return after a single click if this is what was requested.

DMA- The DMA bus can now have more than one device attached at powerup time, without any special softwar

FLOPPY- The Floppy read/write code checks for more errors now. In prior versions, the system would not report a CRC error under certain circumstances, now it will. This hurts some copy protection schemes. The format of the floppy disk has been skewed from track to track to improve disk speed; the XBIOS supports this by using -1d for the skew value and placing a pointer to a one word sector skew table in the previously unused longword.

VDI- The VDI will now draw arcs with smaller angles.

BIOS- Character out routines are much faster.

BLITTER- Automatic blitter chip support is included in line-A and VDI calls. The extended inquire will report a larger performance factor than before, allowing applications to check for the presence of the blitter. A new XBIOS call has been added to check for the blitter and to activate or deactivate it. The blit i t reentrant--line-A and VDI should not be called from within an interrupt.

REGISTER- The registers D0,D1,D2,A0,A1,A2 have always been forfeit when a trap call was made. Now the demise of these occurs under more conditions than before.

MEMORY- Slightly more RAM is used by the system. Programs that were close to the edge on a 520ST may no longer fit.

VARIABLE- Most undocumented system variables have been moved. You were warned!

NOTES and WARNINGS:

1. Some programs depend on the

OS always being at $FC0000. This is *NOT* cast in stone and will probably change soon. To find the OS header, use the pointer "sysbase" as documented.

2. The 4 MEGAbyte ST puts the screen near the end of accessible RAM. Sloppy programs that have been writing past the end of the screen will give bus errors if they do so on the 4 MEG ST.

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editors note: it has been revealed that due to faulty chips off the assembly line (5 out of 25 worked) , half of the blitter chips functions were scrapped in order get them on the street. Question: With only a half BLIT blitter, how does Atari justify increasing the price over the announced press release quotes?, and, what is the existing user base supposed to do, sit around and wait another year for a fully operable chip? .....It'll be ready any day now! SURE.....

JMPUTERIZED RACING

From: Hot Rod Year Book
ON LINE by Marlin Davis
Condensed by Jim Parker

Electronics are only now starting to permeate our industry, but already there have appeared race car computers, electronic suspensions, in car navigation systems, portable clocks, computerized bolt gauges, accelerometers, and other neat gizmos. Most of these devices have appeared in the last three years; many are still fairly expensive. Prices are bound to come down. In a few years "computer phobia" will be replaced by "how did I ever get along without it?" The only constant is the certainty of change.

Many sanctioning bodies as well as the racers themselves have been leery of electronics, fearing it would take the human element out of racing, as well as vastly add to the cost of the sport. But onboard computers and electronic controls offer the advantages of redundancy-a potential problem can be detected before it occurs, and either a back up system kicked in, or the car brought into the pits for a quick repair. Result: better and safer racing because random unforeseen failures are minimized. Expect to see such systems in the near future, if conservative sanctioning bodies permit them. In the meantime, most current race computer technology focuses on data gathering.

At present, the computer must be connected directly to a supplied printer for permanent hard copy downloading. One unit has a hand held data display that lets the user immediately look at the EGT or pressure channels in the pits. Eventually, a hand held data retrieval unit will permit downloading of all data during a 20-second pit stop, for future transfer to any IBM-compatible PC.

The automobile industry is constantly working in the computer industry as a team. They are now experimenting and implementing some of the topics that are in this article. Computers have a very important role in

the safety of our transportation. The sport of racing has contributed to many of the life saving devices we presently have on our automobiles today. Together, all three industries are important players in our safety on the highways.

This article is a little bit different than what you normally see in our news letter. I thought the subject interesting and informative on what the computer is doing and can do in other types of areas, other than our own.

ST Software Review

EMPIRE
Interstel Corp.
Reviewed by Kent Irwin

Having just completed their mission, the aircraft carrier Intrepid prepares to recover its airborne strike force while fighters assigned to combat air patrol circle overhead. I order the battleship Humongous close inshore to provide fire support as my troop transports prepare to land the invasion force. Offshore a host of destroyers and cruisers roam impatiently, awaiting their chance to enter the fray. The smell of victory hangs heavily in the air. This is the culmination of many hours of preparation, manufacturing, planning and combat. I have the industrial power of over thirty cities behind me. This is Empire, Wargame of the Century!

Empire for the Atari ST was released by Interstel Corporation a little over a month ago and promises to be one of the biggest software hits yet for the ST's. You may recall, Interstel is the same publisher that produced Star Fleet I last year for both the eight-bit Atari's and the ST, among other machines. While you may not have thought too highly of Star Fleet I, don't prejudge Empire based on that, as I did. I was very wrong and by the time I learned the error of my ways, Empire was backordered, all the way back to Interstel, due to tremendous demand. It's that good.

I finally did receive my copy of Empire about three weeks ago and have been playing it ever since. In my capacity as a computer and software dealer I have the opportunity to see and play alot of computer games, and I can say with full confidence that Empire is the single most addict[illegible] computer game I have ever played, none. I can't recall the last time I was tempted to sit up until 4 AM with a computer game. Empire not only tempted me to do so, it practically forced me to!

The original Empire was written years ago by Walter Bright and has been widely circulated and played ever since on mainframe systems. Empire, Wargame of the Century, is the first authorized microcomputer version of the original and was adapted and enhanced for the ST by Mark Baldwin of Interstel.

If you are familiar with Risk and

other games of that genre, Empire is based on that same concept. As a captain in the United Galactic Alliance, your mission is to land on a previously unexplored planet and subdue it for the Alliance. Neutral cities must be found, captured and their industrial capacity harnessed for the war effort. Inland cities are capable of producing armies or fighter planes. Coastal cities can produce armies, fighters, troop transports, destroyers, submarines, cruisers, battleships or aircraft carriers. Time in the game is measured in turns. A turn lasts as long as it takes to give each of your various combat units orders for that turn and for the orders to be executed. Production of the various types of combat units takes a set number of turns. While a single army can be produced by a city in six turns, production of a battleship requires sixty turns. Bear in mind that while you are capturing cities, balancing production and plotting strategy, somewhere on this unexplored planet an opponent from the Krellan Empire is doing exactly the same thing. Sooner or later you will meet and the battle will be joined! Mastery of the planet and the fate of the Alliance rests in your hands.

Mr. Baldwin has obviously taken great pains to produce a polished and highly entertaining product. Empire takes full advantage of the GEM interface, offering access to accessories as well as multitudes of pull-down menu options. Among the options are a range of status reports, maps, combat replays and others too numerous to mention here. You also have the ability to save and recall games in progress. That is fortunate, as one game can take as long as twenty five or thirty hours to complete! The gameplay itself takes place in a GEM window overlayed with a grid. Sea areas are blue and land masses green while the various cities and combat units are represented by very recognizable icons. While Empire technically plays like a board game, unit orders are issued by use of the mouse and provided that you give long movement orders in advance, the units will continue to move in the directions you indicate through several turns, lending an animation to the movements that no real board game can achieve. In addition, each unit type produces its own variety of sound effects each time its turn to move comes around. Armies emit sounds like tank engines, aircraft wheeze like jets and ships rumble and churn like the huge machines that they represent. Since the entire "world" cannot possibly fit into a GEM window all at once, vertical and horizontal scroll bars enable you to locate and view any portion you desire.

If you think you might get tired of capturing the same world time after time, don't despair. Empire, Wargame of the Century comes packed with strange new worlds. Each time a game is started you have the option of choosing a map yourself or letting the computer choose one for you at random. And if that's not good enough there's also a map editor that will allow you to create an

infinite number of worlds yourself. Mr. Baldwin has truly thought of almost everything.

As many as three opponents, in any combination of human and computer opponents can play the same game. There is even a play by mail option,although it would be excrutiatingly slow to play this way I am sure. At the beginning of each game you also have the option of modifying the skill levels, production efficiency and combat efficiency of each of the opponents. There aren't many options that you could conceive of that aren't already included in the game.

Empire, Wargame of the Century is distributed on a non-copy protected disk, enabling you to make backups or install it on your hard drive. Protection from weak-minded thieves is accomplished by requiring the entry of a word taken at random from the seventy two page manual. I despise software thieves but I also hate disk protection. I have no problem with this increasingly popular method of theft protection and wish that more publishers would adopt it in lieu of disk-based copy protection. The manual itself is excellent in every respect, but if for some reason you need more help, Mr. Baldwin is currently active in the Gamers Forum on Genie. He's there supporting the program and taking suggestions for future revisions. That kind of support is hard to beat.

Empire, Wargame of the Century is being distributed by Electronic Arts, with which Interstel is affiliated. Suggested list price is $49.95 and in my opinion is worth every penny. Pick it up. I don't think you'll be disappointed.

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EIGHT BITS HIGH, AND RISING. . .

by Jim Dysle
THE ACCESS KEY Newsletter 10/87
Retyped for STATUS by Gene Rodriguez

Through the years with my Atari, I have written many programs, drawn pictures, played music, written stories, created posters, signs, cards, telecommunicated, kept inventories, used financial spreadsheets, introduced others to the Atari computer, taught novices, and, yes, I have played many games.

I still recall a winter day in 1981 when an elderly co-worker inquired "What can you do with a home computer?" Her question was sincere and I was overwhelmed with astonishment. I reponded with "What can't you do with a home computer?". As I spoke those words, I realized that my overpowering enthusiasm had provided a gut level response. I quickly followed with a list of the things that I did with my Atari.

Six years and that question, in one form or another, is still being asked. I usually rattle off my use of the computer until I think I have

justified the existance of home computers. The next question is usually "Why Atari?" Then, "Why the old Atari?"

I originally bought my computer to have fun. I am still having fun. When this ceases to be fun, I will stop. Words to this effect usually draw a knowing smile that seems to imply "Aha, what you are really saying is that you use your computer to play arcade games." One of these days, in spite, I intend to respond with "Yes, that's right. I have been playing Pacman for six years, non stop, and I will continue until i die." I doubt it would help to say that in 1980, I sold my Atari 2600 because I was bored with computer games. But this conversation would likely lead down familiar paths and I am a weary traveler.

Today, I bring before you the object of letter writting with Atari. But before I start, let me jump back in time. Back to a time...Before Atari. Have you got the picture? Gruesome, ain't it? Some decades ago, the mailman brought me a large envelope. The writing upon that envelope was most ornate and flourishing hand written script I have ever seen. Intriqued, I opened the envelope and withdrew a piece of cardboard and two sheets of...paper? The cardboard was included to prevent the envelope from being folded. The sheets were coarse, more like fabric than paper, and the coloring seemed to indicate age. The words upon those sheets were also handscripted in the same style of the envelope. It was a letter from an elderly couple who befriended me during my stay in their city.

Though their words were appreciated, I was more impressed with the many hours they must have spent in preparing the letter. Since then, I tend to take a little extra effort when writing to friends. An old friend was in the military and he requested more letters from home. About a month later, I received a letter from him expressing his astonishment over a letter he had received. According to him, that letter he recieved was composed of thirteen typewritten pages of single line spacing and elite type. He said that he had taken a vow to finish reading my letter within his lifetime....

Today, I have my Atari, Word Processor, Print Shop, Typesetter, colored papers and ribbons, etc. to prepare letters to my friends. When I am writing a letter that will fit upon one sheet, I use Print Shop. I create a card in the usual manner and put an instruction on the inside bottom of the card which says "SEE INSIDE". After printing the card, I flip the unfolded sheet and re-insert it into the printer. Upon the backside, I select a graphics header from Print Shop or Typesetter. Beneath the header, I place the text which I have earlier prepared with my word processor. In some instances, I make multiple printer passes to accomodate colored ribbons.

For larger letters, I put graphics headers and footers upon each sheet,

using either Print Shop or Typesetter, or both. I use these graphics as cartoon panels to tell a story that may or may not be related to the text. These letters require multiple printer passes to allow for different programs and colored ribbons. As you might expect, I don't do this very often but the recipients seem to appreciate the effort.

There are also times, such as when we move, take a prolonged vacation, etc. that I create a newsletter with typesetter and mail it off to (hopefully) interested friends and relatives. In some of my letters, I also include a sign that I have prepared using Print Shop. These signs are prepared specially for the addresse and meant to be humorous.

And while I am on the subject of signs, I also create silly signs that clutter our walls at home and at my wife's office. At her office, it is not uncommon for her co-workers to request a copy for themselves. About a month ago her co-worker wanted to borrow some of the original signs. She wanted to show them to her husband in hopes of providing an additional incentive for him to buy a computer for their home. Since I am susceptible to flattery, I went a step further and created a number of new signs to show her husband. Last week, I asked my wife whether her co-worker and husband had decided to buy a home computer. My wife nodded affirmatively and then somewhat reluctantly informed me that they had chosen to buy two complete computer systems for their home, both will be IBM PC'S... Sigh

And now, if you will excuse me, I must get back to my Pacman game.

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PUZZLE

This is an unusual paragraph. How quickly can you find out what is so uncommon about it? It looks so ordinary that you think nothing is odd about it until you match it with most paragraphs this long. If you put your mind to it and study it, you will find out, but nobody may assist you; do it without any coaching. Go to work and try your skill at figuring it out. Par on it is about half an hour. Good luck---and don't blow your cool.

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eds note: first correct answer will win honorable mention in our next newsletteter. Upload your answer to STATUS BBS or contact me by phone.

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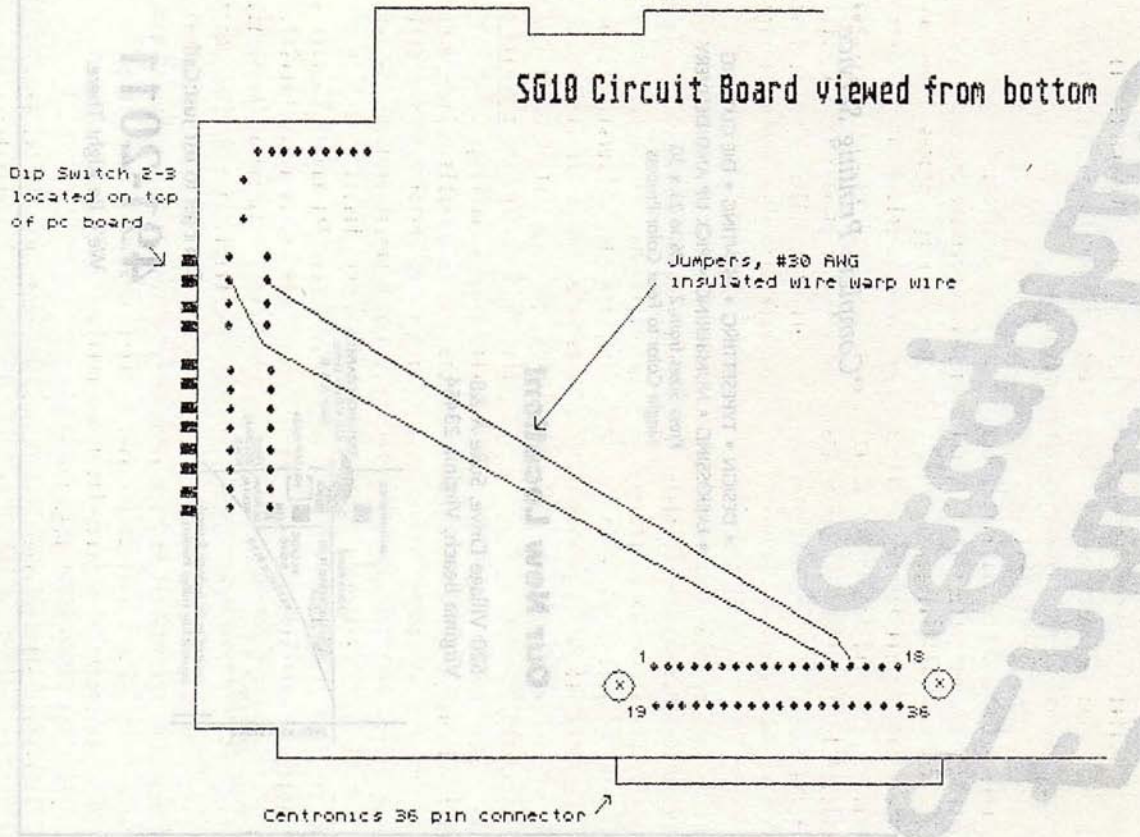
MEETING DATES

NOVEMBER 5
NOVEMBER 19
DECEMBER 3
DECEMBER 17- THIS WILL BE A JOINT MEETING WITH THE PACE GROUP FROM HAMPTON AS WELL AS A "GARAGE SALE NITE" AND OUR CHRISTMAS PARTY.
JANUARY 7

EXERCISE YOUR RIGHT OF MEMBERSHIP- ATTEND OUR MEETINGS!

FIG. 1



DEGAS & RML

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Meetings: STATUS meetings are held on the first and third Thursdays of the month at the 7-UP Bottling Company, 5700 Ward Avenue, in Virginia Beach at 7:30 p.m. All interested parties are welcome to attend.

Newsletter Articles:

Submitted articles are preferred as disk text files, but will be greatfully accepted as hard copy (including handwriting) if you do not have a disk drive. If you have a modem, you can upload your articles to the Editor by calling the STATUS BBS at 468-1096. Articles may be submitted at any time, but will probably not make that month's Newsletter if submitted less than one week prior to the first meeting of the month.